

must be attempted. "The time has arrived," says Dr. Manley, "when medical schools must become subjects of discipline." The only question is, what salutary discipline is it possible to apply? Dr. Manley thinks that the abuses will continue "so long as private speculation in teaching controls the issue of medical licenses," in other words, that the diploma should not confer a right to practice medicine. Under a different political constitution from ours, such a plan would undoubtedly be the best, but experience shows, that in this country medical science has always been treated by legislators as if it was the least important of human concerns; and we have, therefore, every reason to dread that our sacred ark should be touched by their unhallowed fingers. We have not yet reached that stage of national existence at which it is learned that perfect liberty is perfect obedience to just laws, and in no wise license to do what seems good to every one. Meanwhile, the law of self-preservation bestows the right, and our actual situation imposes the duty, of restraining within just bounds the power of traders in medical education, to disgrace the office of teacher, and destroy the respectability of the medical profession in the eyes of the world. If it were made disreputable to be connected with institutions such as Dr. Manley has described in the paragraphs quoted above, if the society of their professors were shunned, and it were shown that their participation in the affairs of the American Association, and other similar bodies, is tolerated only, and not desired; if the colleges which are endeavouring in good faith to improve medical education, were resolutely to refuse to recognize the students and graduates of the "trading schools;" and if, finally, *every physician should, when the occasion required him to write his title, add the name of the institution which conferred it*;—we are persuaded that in a few years the unworthy schools would either become extinct, or going altogether over to quackery, there would be a great and impassable gulf fixed between them and the medical profession, so that the public would at once know the marks by which a genuine physician may be distinguished from his counterfeit.

A. S.

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ART. XIV.—*The Plea of Humanity in behalf of Medical Education. The Annual Address delivered before the New York State Medical Society, and Members of the Legislature, at the Capitol, February 6th, 1849.* By ALEXANDER H. STEVENS, M. D., President of the Society, of the American Medical Association, &c. Albany, 1849: pp. 20.

THE dignified and almost solemn tone of this address is well suited to the momentous truths which it contains, and well becomes a man who is second to none in the useful labours of a long life, for his experience as a professor of medical science and art, and for the distinguished eminence which he has won for himself in the medical profession. No one could better claim the right of being heard by his brethren and the legislature of the Empire state, when the cause of medical education was to be vindicated; and his address shows that it would be difficult to make a better plea in favour of the essential beneficence and utility of the healing art.

The speaker first directs the attention of his audience to the names of Van Ness, Clinton and Kent, and after showing how these statesmen fostered medical education, declares the design of his discourse to be the vindication of their policy. A sketch of the physician's vocation follows, in which occurs this striking passage:

"The offspring of the highest and lowest, in the first moments of their existence, come under his care, alike naked and helpless. The screen which in after life conceals many of their weaknesses and some of their virtues, ever open more or less to the medical observer, is for him removed by sickness and misfortune. Before the man of healing the trappings of greatness are laid aside, and the cloak of deformity is dropped; beauty puts off her ornament, and without a blush modesty raises her veil. . . . Surely they who hold such relations to society should be learned, discreet and wise; trained by liberal studies and by illustrious examples, to be ever true to the cause of humanity; elevated by education, as

by education alone they can be elevated, to rise above all that is sensual and sordid."

Experience is the only source of sound medical learning, but "the experience of any single individual, in comparison with the knowledge to be derived from a study of the experience of others, is exceedingly small, and can never render a person competent to practice medicine. The experience of a long life would not equal the amount of useful knowledge that might be imparted by a competent instructor in a single year. The self-taught physicians are scarcely taught at all; and would be still more ignorant if they did not obtain information in casual intercourse with men of superior education and attainments." These sentences contain in miniature the whole argument for the necessity of a thorough medical education; we would that they were indelibly impressed upon the mind of every physician in the United States; for then no one could fail to take an earnest part in the improvement of medical education. How many of our medical graduates must be included in the class of self-taught physicians!

A prevalent error is thus happily exposed. "It is often assumed that the parties interested in the discussion which the subject provokes, are the medical profession on the one hand, and the empirics on the other; and that it is a conflict of interests between them in which the public have little concern. Such notions are not confined to the ignorant and vulgar, but are entertained by men of the learned professions, and even by legislators. Medical brothers you well know, fellow citizens you ought to know, better! The real parties are the public and the regular physicians on one side, and the charlatans and their abettors on the other."

Adverting to the vulgar notion that money is the primary object with physicians, Dr. Stevens cites the immense number of charitable institutions and private individuals whom they serve gratuitously, the straitened circumstances in which most physicians leave their families, and the readiness with which medical discoveries and inventions which might make the fortune of individuals, are thrown open to all the world. When some attempt was made to patent the invention of anæsthetic inhalation, "the indignation of the profession was roused from one end of the country to the other." But, "if the pecuniary rewards of physicians are so small compared with the expenses of their education and the severity of their labours, why are so many ready to enter the medical profession? I answer because the study of it is so delightful; and because the practice brings with it higher rewards than money can bestow. Who that feels that life is saved or prolonged by his skill, does not receive a reward? Who that has felt the warm tear of gratitude for rescuing from death a husband, a wife, or child, would wish to be other than a physician?"

After portraying on the one hand the life of the humane physician, whose only riches and legacy to his children are the gratitude of his patients, the honour of his profession, and his good name, and on the other the career of the quack, whose ill-gotten wealth cannot purchase exemption from contempt during life, and speedy oblivion after death, Dr. Stevens proceeds to show "what is doing and what has been done by medical men towards ameliorating the condition of society." His position is high but unassailable; and yet we venture to say that few even of our physicians have an equally just idea of the dignity and power and usefulness of their vocation. The medical man is shown by Dr. Stevens in his influence upon the physical and mental training of the families committed to his care; if he is a man of education, taste and knowledge, he does much to encourage, refine and improve his younger patients, and again and again he becomes the peacemaker and the moral guardian of the domestic hearth. In society his influence is not less real, although it may be less given to display itself openly, than that of the other liberal professions; and inasmuch as the physician is by his habits of thought and association less inclined to partisanship and fanaticism, his guidance in the affairs of men is all the more permanently felt. The physician is always found taking the lead in measures for improving the morals and the knowledge of the community; Dr. Stevens alludes especially to the part which he has taken in the "temperance reform," to his ministry in procuring the foundation of hospitals, and of asylums for the insane, of institutions for the deaf and dumb, for idiots, for the blind, &c., in all of

which relations the medical faculty of New York have been distinguished for their wise and humane policy, and for their untiring assiduity. Their labours in that department of natural science and art which has done so much for elucidating the theory, and increasing the profits of agriculture, and of the mechanic arts, are appropriately alluded to in this address.

By an enumeration of statistical results, Dr. Stevens illustrates "the prodigious extent to which human life has been lengthened with the advance and diffusion of medical science," and lest the skeptical should doubt the reality of the operation of the cause here assigned, examples are given of large charitable institutions in which the diminished rate of mortality bore a strict proportion to the improvement in their medical management. "Until within the last two years, the New York Almshouse, with its hospital, has been under political management. The mortality during a period of twenty years was more than twenty per cent. per annum. Two years since a new organization was made, and the whole establishment was placed under the control of one resident physician, and an efficient corps of unpaid physicians and surgeons. During these two years the mortality has been reduced to about twelve per cent. per annum." In the Nursery Hospital on Blackwell's Island the mortality was twenty-three and one-fourth per cent. in 1847, but in 1848, under a different organization, it was reduced nearly one-half.

The results of those hygienic measures, which physicians alone are competent to recommend, illustrate the value of medical science much better than the results of the treatment of disease and injuries, because they are furnished by a vastly larger number of individual cases. Dr. Stevens goes into a calculation based upon the admitted average value to the State of every sound adult life, to prove that a diminution of the annual mortality of the State of New York, would be productive of a saving to the commonwealth, amply sufficient to supply every part of the State with learned and skilful physicians, and to support agricultural professors. Fortified by this demonstration, he contends that "it is the duty of a wise government to take care of the lives of the citizens. They who labour for the wealth of the State have a right to expect that a well-educated physician should be within their reach, when they or their families are disabled by injury or disease." In urging upon the legislature to recognize this right by means of legal enactments, he employs this cogent argument. "The public must always employ medical men; and it rests with the legislature to decide upon the degree of knowledge and skill which they think it right to give to men entrusted with the care of the health and lives of the people. In supporting your common schools, it is not the teachers for whom you legislate; and in supporting medical schools, it is not the medical professors, and still less the medical profession, on whom your bounty is bestowed."

The necessity of the government assuming the conduct of medical education, and of prohibiting unqualified persons from practicing medicine, arises, in the opinion of Dr. Stevens, from certain peculiarities of our countrymen. "The defect of the American character, as regards scientific acquirements, is overweening self-confidence, or an undervaluing of the necessity of technical knowledge, for the successful pursuit of the learned professions, and consequently a lamentable deficiency or superficiality in their acquirements. This characteristic has tended to deteriorate the general standard of education." Whatever difference of sentiment may exist as to the *policy* of invoking a governmental interference that must, we fear, soon become partisan and political under our democratic system, all candid men must agree that the statement just quoted is the literal but mournful truth. We rejoice that one so high placed and influential as Dr. Stevens has not shrunk from speaking it boldly and plainly. It is because this statement is true that so many colleges "send forth young men with their degrees, very imperfectly qualified to discharge their high and responsible duties." It is because this is true that "a school is attractive to students which gives degrees upon easy terms; whose examinations are not too rigid; and that it is therefore quite possible for a school to be flourishing while the general education of its students is deteriorating."

The remedies proposed by Dr. Stevens for the evils which he has depicted are "to bring a *good medical education* within the reach of a larger number of stu-

dents: to open the doors of the medical schools without charge to all that have received the necessary preliminary education, to insist upon a longer period of study, and to make the examinations more strict." The spirit of these recommendations must be approved by every lover of sound medical learning; and all would rejoice to witness its legal application in that great State which has been the first successfully to engage the medical profession of the United States in the cause of educational improvement. A. S.

ART. XV.—*Manual of Physiology.* By WILLIAM SENHOUSE KIRKES, M.D., assisted by JAMES PAGET, Lecturer on General Anatomy and Physiology at St. Bartholomew's Hospital. With one hundred and eighteen illustrations on wood. Philadelphia, Lea & Blanchard, 1849. 12mo. pp. 552.

THIS is, certainly, a most able manual of physiology. The student will find in it, not a meagre outline, a bare skeleton of the leading particulars embraced in the science, but a very complete and accurate—though, at the same time, concise—account of the facts and generally admitted principles of physiology; forming an admirable introduction to the study of that science, as well as a useful compendium for consultation by those who are preparing for an examination.

The work was originally commenced with the intention of making it simply a digest of Müller's elements—and several of the chapters are of this character. In other portions of the work, the original design has not been followed out. In regard to the subjects embraced in these, "it was found that the progress of physiology, during seven years, had so increased or modified the facts, and some even of the principles of the science, that Müller's Elements, and the notes by Dr. Baly, could only be employed as among the best authorities and examples."

While all discussions of unsettled questions and expressions of personal opinion are necessarily omitted, ample references are given, not only to works in which these may be consulted, but to those, also, by the aid of which the study of physiology, in its widest extent, may be pursued.

The English edition bears the title of "Hand Book." This the American publisher has altered to "Manual"—"as being more appropriate to the character of the work." In what this greater appropriateness consists, we are at a loss to imagine: we had always supposed that the Saxon *hand=buch* and the Latin *Manuale*, both meant one and the same thing.

The illustrations which are from steel plates in the original edition, are in the present from wood engravings, and being placed upon the same page with the text, are much more convenient for reference. Occasionally a different representation of the same object has been substituted, where such alteration appeared advantageous.

The whole of the illustrations are very excellent, and calculated to render the description of the objects they represent clear and precise.

To those who stand in need of a Manual of Physiology—and works of this description have now become, in a certain sense, indispensable portions of the apparatus of study—we can very confidently recommend the present one as well for its comprehensiveness as for its general accuracy. D. F. C.

ART. XVI.—*An Introduction to Practical Chemistry, including Analysis.* By JOHN E. BOWMAN. Philadelphia: Lea and Blanchard, 1849. 12mo. pp. 303.

THE above is the title of a republication, the special object of which is to explain, and render familiar to the beginner, the various processes employed in analysis, and for the illustration of chemical science. Although intended as a text-book for the author's class, it deserves a wider circulation, from the clear and concise mode of explanation of the processes, and the simplicity of the manipulations, placing the acquisition of the science by actual practice within